Ministry of Mines

National Mineral Exploration Trust

Minutes of the 32nd Technical-cum-Cost Committee (TCC) meeting held on 10th and 11th Aug, 2021 through videoconferencing at Geological Survey of India, DGCO, A-II Pushpa Bhawan, New Delhi

The 32nd meeting of Technical-cum-Cost Committee [TCC] of National Mineral Exploration Trust [NMET] was held under the chairmanship of Shri Janardan Prasad, Additional Director General, Geological Survey of India [ADG, GSI], and Chairman, TCC, NMET on 10th and 11th August, 2021 at GSI, DGCO, A-II Pushpa Bhawan, New Delhi through videoconferencing. The TCC members and representatives of Exploration Agencies [EAs] participated through their respective VC nodes. The list of participants is at **annexure-1**.

Dr. L. P. Singh, Director, GSI and Member Secretary, TCC-NMET, welcomed Shri Janardan Prasad, ADG, GSI & Chairman, TCC; Members of the TCC, participants representing various EAs. He briefly outlined the project proposals submitted by EAs and conveyed that total five new project proposals [IBM (1) and CMPDI (4)] have been kept for discussion of 32nd TCC meeting.

Shri Janardan Prasad, ADG, GSI and Chairman, TCC welcomed the participants. The proceeding of meeting was initiated as per circulated agenda.

Agenda-wise discussions are summarised as follows.

32.1: Technical evaluation of new project proposals:

32.1.1. Proposal for procurement of chemical analysis instruments at mineral processing laboratory of Indian Bureau of Mines through assistance from National Mineral Exploration Trust (NMET). [Implementing Agency: IBM]

a) It has been submitted that the Indian Bureau of Mines [IBM] deals with analysis of various kinds of ore, minerals and ore dressing/beneficiated products having concentration up to parts per trillion (ppt) level, so the instruments having various detection limits are of immense importance for exploration activities in the country.

b) IBM has conveyed that the beneficiation studies are carried out for exploration samples received from various exploration agencies (MECL, GSI etc.) and are mandatory to assess the auction potentiality of mineral blocks. Chemical analysis has to be carried out on the various beneficiated products generated at each stage. At present, IBM does not have chemical analysis instruments, hence all the chemical analysis work have been carried out manually and is time consuming.

c) Keeping the above in view, the IBM has proposed for procurement of chemical analysis instruments [Wavelength Dispersive X-Ray Fluorescence (WD-XRF) Spectrometer and Inductively Coupled Plasma-Mass Spectrometer (ICP-MS)] at mineral processing laboratory of Indian Bureau of Mines through assistance from National Mineral Exploration Trust (NMET) fund.

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The Committee opined that these instruments, proposed for procurement, are of utmost importance for beneficiation studies in IBM. The committee was of the view that the procurement of XRF and ICP-MS may enhance the pace of analyses of beneficiation samples which are of immense use to assess the auction potentiality of mineral blocks. However, the committee expressed that the funding for procurement of infrastructure development [procurement of instruments] through NMET fund doesn't come under the purview of TCC. Moreover, it is an administrative decision, which may be taken at appropriate level in Ministry for funding of this project through NMET.

Further, the Committee expressed that a clear guideline may be issued by Executive Committee (EC) on funding of such infrastructure project and an agenda may be kept in next EC meeting in this regard.

32.1.2. Preliminary exploration (G3) for coal in West of Borda and Ghonsa-Parsoda Block, Wardha Valley Coalfield, District- Chandrapur, Maharashtra. [Implementing Agency: CMPDI]

a) CMPDI has submitted that the Wardha Valley Coalfield spreads over an area of about 4,130 sq km and is characterized by the presence of one thick Coal seam varying in thickness from 15 m to 20 m that splits into two sections as Seam II & Seam I.

b) It has been conveyed that the regional exploration was carried out by GSI, in Borda & Borda Extn, Ghonsa & Parsoda blocks during 2012-15 wherein four scout boreholes were drilled in Jamkhola area, with 1596.80m drilling and three scout boreholes were drilled in Dabhadi Area, with drilling of 1341.50 m. Out of these seven scout boreholes, coal seams were encountered only in four boreholes, the other boreholes were closed in Motur/Deccan Trap and were not lowered upto Barakar Formation.

c) It has been conveyed that in the adjoining areas the coal seams have been encountered below the depth of 250-300m in almost all boreholes and the expected overall grade of coal, in the proposed block, varies from G5-G10 category.

d) Based on deliberations the committee suggested to take up the exploration by deploying 14,500m drilling in 18 boreholes at grid interval of 1600m x 1600m with a revised borehole plan by maintaining the boundary buffer zone at 800m in all directions of the block.

The Committee recommended the proposal for approval of Preliminary exploration (G3) for coal in West of Borda and Ghonsa-Parsoda Block, Wardha Valley Coalfield, District- Chandrapur, Maharashtra with estimated cost of Rs. 1201.57 Lakh including GST in time schedule of 18 months for carrying out the proposed work and submission of report as per Annexure-2A & 2B.

32.1.3. Preliminary exploration (G3) for coal in West of Chano-Rikba Coal Block, North Karanpura Coalfield, District- Hazaribagh, Jharkhand. [Implementing Agency: CMPDI]

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a) The north Karanpura coalfield is the western most member of the east-west chain of Damodar Valley Gondwana coalfields and forms a vast expanse of coal bearing formations of Jharkhand state. The coalfield is known primarily for its resources of non-coking coal which are characterized by a high percentage of Ash and Moisture content and suitable for power generation.

b) The North Karanpura Coalfield is characterized by the presence of five coal seams. The west of Chano-Rikba block covers an area of 33.6 sq. km and is situated in the south-eastern part of the North Karanpura coalfield. It has been submitted that the detailed exploration was carried out by CMPDI during 2005-2010 in adjacent Chano-Rikba Block. Fourteen coal seams and two local seams were established in the Barakar Formation and local seams K-II and K-I were established in Karharbari Formation. The proposed block is the south western extension of Chano-Rikba block and the same seams are expected to be encountered in this block.

c) In view of this, CMPDI has proposed to take up preliminary exploration (G3 stage) for coal in west of Chano-Rikba block by involving 6,215 m of drilling in 12 boreholes at grid interval of 1600m×1600m. It is expected that the coal grade varying from ungraded to Washery grade-IV may be encountered in the block.

d) Based on deliberations, it has been observed that about 60% area of the block is covered by the rocks of Chhotanagpur Granite Gneissic Complex [CGGC]. In view of this it was decided that the five proposed boreholes [P7, P8, P9, P11 and P12] need to be dropped by discarding the area covered by CGGC and a revised proposal may be submitted by CMPDI.

The Committee suggested to submit the revised proposal by excluding the area covered by CGGC with revised borehole plan of the block.

32.1.4. Preliminary exploration (G3) for coal in North of Rajathari, Pench Kanhan Tawa Valley Coalfield, District- Chhindwara, Madhya Pradesh. [Implementing Agency: CMPDI]

a) Pench Kanhan Tawa Valley Coalfield occupies southern limb of Satpura Gondwana basin and the north of Rajathari block lies in the north-eastern part of this coalfield.

b) Regional & Detailed exploration in the adjacent Pathakhuri-Pipariya block was carried out by GSI and CMPDI respectively. After completion of regional exploration by GSI in Pathakhuri-Pipariya block it was interpreted that the coal resources are suitable for underground mining only.

c) In the Pathakhuri-Pipariya Block, Barakar Formation is the only coal bearing formation having economic significance. Regional exploration in this area revealed occurrence of five coal seams in Barakar Formation.

d) In assumption that similar geological set up will be encountered in the north of Rajathari block, the CMPDI has proposed to take up preliminary exploration [G3 stage]. It is pertinent to mention that the north of Rajathari Block is the dip side extension of Pathakhuri-Pipariya & Pathakhuri- Pipariya XI-R (GSI) Block and the coal seam may

be encountered at greater depth. The overall expected coal grade in the proposed block may vary from G3-G10.

e) CMPDI has proposed to take up drilling of approximately 16,900 m in 18 boreholes at 1600mx1600m grid in North of Rajathari Block. It is pertinent to mention that in the adjoining Pathakhuri-Pipariya & Pathakhuri-Pipariya blocks the coal seams [thickness 0.5 to 5m] are occurring below 450m. The expected depth of intersection for seam V may vary from 800m to 1200m.

The Committee recommended the proposal for approval of Preliminary exploration (G3) for coal in North of Rajathari, Pench Kanhan Tawa Valley Coalfield, District-Chhindwara, Madhya Pradesh with estimated cost of Rs. 1388.23 Lakh including GST in time schedule of 20 months for carrying out the proposed work and submission of report as per Annexure-3A & 3B.

32.1.5. Reconnaissance Survey (G4) for coal in North West of Madheri Extension block, Wardha Valley Coalfield, District-Wardha, Maharashtra. [Implementing Agency: CMPDI]

a) The Wardha Valley Coalfield spread over an area of about 4,130 sq. km and is characterized by presence of one thick Coal seam varying in thickness from 15m to 20m that splits into two sections as Seam II & Seam I. North West of Madheri Extension Block is located in the extreme north-western part of Wardha Valley Coalfield. The block is mostly covered with Deccan Trap basalt throughout the area. Seasonal nalas are located throughout the block. The block lacks any kind of forest cover. Veena River forms the eastern boundary of the block.

b) It has been conveyed that the exploratory drilling and surface/sub-surface data was acquired by DGM, Maharashtra and CMPDI in the Madheri Block and North West of Madheri blocks. Only one composite seam was encountered in Barakar Formation on the basis of previous study in the area.

c) The seam consists of distinct top, middle & bottom sections which are separated by carbonaceous shale and grey shale with intermittent thin coal bands. Local carbonaceous band(s) intersected 50m to 60m above composite seam were found to be unworkable.

d) Accordingly, CMPDI has proposed to take up reconnaissance survey (G4 stage) for coal in North West of Madheri extension Block involving 4500m of drilling in 6 boreholes at 3200m x 3200m grid interval along with Resistivity imaging of 120 Line Km.

After detailed deliberations, the Committee opined that the decision on recommendation of this project proposal will be taken only after discussion with DGM, Maharashtra. The committee suggested that the DGM, Maharashtra may be requested to be present in the next TCC meeting.

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32.2. Timeline extension of projects.

32.2.1. Approval of Extension of Contract for the project of "Interpretation of Legacy data and TS-QC consultancy" by 15 months with effect from the issue of the Extension order without any financial impact.

a) GSI has conveyed that the TS-QC consultant was appointed for four work components viz. (i) Interpretation of legacy data and submission of report; (ii) Preparation of DPR for Heliborne data acquisition; (iii) Tender management for engaging agency for Heliborne data acquisition and (iv) Technical supervision and quality control of PIA for Heliborne data acquisition. Two milestones [1 and 2] have been completed in January, 2020 by TS-QC consultant.

b) It is pertinent to mention that the approval for engaging the TS-QC consultant for heliborne geophysical survey was accorded by NMET in 20.8.2018 for implementation and accomplishment of work within a time period of 12 months from the date of MoA.

c) GSI has conveyed that the MoA between GSI and M/s IDPeX Pvt. Ltd with the consortium partners of M/s Datacode, India, M/s Peterson Grant & Watson Ltd., Canada and M/s International Geoscience Services Ltd. UK was signed in 18.1.2019 up to 30.4.2020.

d) The remaining two milestones depend on the approval of Heliborne data acquisition project from NMET. It is prudent to mention that the approval for Heliborne data acquisition was accorded in April, 2021 and thereafter the milestone 3 and 4 will be taken up by the TS-QC consultant.

e) Keeping this in view, GSI has requested for time extension of 15 months [from now onward] for completion of remaining two [3 and 4] milestones without any financial impact.

f) Based on the detailed deliberation, the committee suggested that the time period for the said project need to be regularised by providing the appropriate time extension. Committee observed that the time period between May, 2020 and August, 2021 (16 months) was a gap period as the milestone 3 and 4 cannot be initiated without approval of project "Heliborne data acquisition".

Keeping above in view, the committee recommended for approval of timeline extension of 31 months for completion of the said project without any financial impact by Executive Committee.

32.3. The meeting ended with vote of thanks by Director and Member Secretary, TCC, NMET.

List of TCC members attended 32nd Technical-cum-Cost Committee (TCC) meeting of NMET held on 10th and 11th August, 2021 through videoconferencing.

S. No.	Name/Designation	Status	Remarks
1	Shri Janardan Prasad, ADG & HoD, SR, GSI, Hyderabad	Chairman, TCC, NMET	Attended in person
2	Shri Ranjan Kumar Sinha, Controller General (Retd.) Indian Bureau of Mines, Noida	TCC Member	Attended via videoconference
3	Shri P. Tarafdar, Dy. Director General (Retd.) Geological Survey of India, Kolkata	TCC Member	Attended via videoconference
4	Dr. Manoranjan Mohanty, Dy. Director General (Retd.) Geological Survey of India, Bhubaneshwar	TCC Member	Attended via videoconference
5	Shri Naeem Ahmad, General Manager-Exploration (Retd.), CMPDI Ltd., Aligarh	TCC Member	Attended via videoconference
6	Dr. Anjani Kumar, Dy. General Manager (Exploration) & HoD-Planning (Retd.), MECL, Nagpur	TCC Member	Attended via videoconference
7	Dr. J. V. Ramarao, Dy. Director General (GP) [Retd.], Geological Survey of India, Hyderabad	TCC Member	Attended via videoconference
8	Shri B. Saravanan, Additional Director, Atomic Minerals Directorate for Exploration and Research, Hyderabad	TCC Member	Not Attended
9	Dr. L. P. Singh, Director, Geological Survey of India, DGCO, New Delhi	Member Secretary, TCC, NMET	Attended in person
10	Shri Amit Saran, Director, NMET, MoM	TCC Member	Attended via videoconference
11	Shri Ravi Kumar Gupta, Deputy General Manager (Finance), HCL, Kolkata	TCC Member	Not Attended
12	Shri P. K. Maharana, Dy. General Manager (Finance), NALCO, Bhubaneshwar	TCC Member	Not Attended
13	Shri Vinay Pal, Assistant Cost Account Officer (Finance), Geological Survey of India, DGCO, New Delhi	TCC Member	Attended in person

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Annexure-1

List of participants attended 32nd Technical-cum-Cost Committee (TCC) meeting of NMET held on 10th and 11th August, 2021 through videoconferencing.

S. No.	Name/Designation	Email ID	Contact No	Organisation
1	Shri Janardan Prasad, ADG & HoD, SR, GSI	janardan.prasad@gsi.gov.in	7763800788	Chairman, TCC
2	Shri Ranjan Kumar Sinha, Controller General (Retd.) IBM	sinhark57@rediffmail.com	9421777637	Member, TCC
3	Shri Pradipta Tarafdar, DDG (Retd.) GSI	tarafdar.pradipta@gmail.com	9503088847	Member, TCC
4	Shri Manoranjan Mohanty, DDG (Retd.) GSI	manoranjanmoha@gmail.com	9483511287 8249014425	Member, TCC
5	Dr. J. V. Ramarao, DDG (GP) (Retd.) GSI	rarajammi@gmail.com	9440691284	Member, TCC
6	Shri Anjani Kumar, (Retd.), MECL	anjanikumar1957.ak@gmail.com	9975350576	Member, TCC
7	Shri Naeem Ahmed, (Retd.), CMPDI	ahmadnaeem17@yahoo.co.in	8588092153	Member, TCC
8	Dr. L. P. Singh, Director, GSI	nmet-tcc@gov.in	9490748249	Member Secretary, TCC
9	Shri Vinay Pal, ACAO, GSI	palvinay009@gmail.com	8527368161	Member, TCC
10	Shri Debkumar Bhattacharyya, Dy. Director General	debkumar@gsi.gov.in		GSI, RSAS
11	Dr. Deshraj Trivedi, Senior Geologist	nmet-tcc@gov.in	9419244294	NMET
12	Shri V. K. Srivastava, GM (Exploration)	gmexpl.cmpdi@coalindia.in	8987788782	CMPDI
13	Dr. R. P. Singh, Manager (Geology)	gm.exploration.cmpdil@gmail.com	8987789047	CMPDI

Annexure-2A

Estimated cost for Preliminary exploration (G3) for coal in West of Borda and Ghonsa-Parsoda Block, Wardha Valley Coalfield, District- Chandrapur, Maharashtra

Total block area- 60.95 sq. km; Nos. of Borehole- 18 [1600x1600m grid]; Borehole depth range- 550 to 900m; Completion Time- 18 months								
S. No.	**Item Work**	**Item no in SoC**	**Unit**	**Rates as per SoC of NMET**	**Rate (Rs.)**	**Qty.**	**Amount (Rs.)**	**Remarks**
1 Outsourced Component								
	I- Field operations (Outsourcing)							
A	**DRILLING**							
1	Drilling (As per MoC Rate 2020-21)	2.2.1.1b	m	5,619	5,619	14,500	8,14,75,500	Copy of MoC approved Rate is required
B	**GEOPHYSICAL STUDIES**							
1	Borehole Geophysical logging (As per MoC Rate 2020-21)	MoC Rates - Pls. refer note 5	m	656	697	14,500	1,01,06,500	Copy of MoC approved Rate is required
					Total Cost of Outsourcing Component		**9,15,82,000**	reimbursement of outsource component will be made as per Para 3 of NMET-SoC
2 In-House Component								
	I- Field Work							
A	**GEOLOGICAL WORK**							
1	Survey Work	1.6.1b	Day	8,300	8,300	20	1,66,000	
2a	Geological Party days-Field)	1.5.1b	Day	11,000	11,000	180	19,80,000	
2b	Geological Party days-HQ (Data processing & Report Preparation	1.5.1b	Day	9,000	9,000	60	5,40,000	
						Sub Total- A	**26,86,000**	
B	**GEOPHYSICAL STUDIES**							
2a	Geophysicist Party days- Field	3.19	Day	11,000	11,000	25	2,75,000	
2b	Geophysicist days-HQ (Data processing & Report Preparation)	3.19	Day	9,000	9,000	15	1,35,000	
						Sub Total- B	**4,10,000**	
						Field Work Total- (A+B)	**30,96,000**	
	II- Laboratory Studies							
1	**Band By Band Analysis**							
a	Ash + Moisture	4.2.6	per sample	700	700	800	5,60,000	

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b	House Keeping	4.2.1	per sample	115	115	800	92,000	
2	**Overall analysis**							
a	Proximate analysis	4.2.7	per sample	935	935	100	93,500	
b	Moisture at 60% RH & 40C	4.2.8	per sample	1,010	1,010	100	1,01,000	
c	GCV	4.2.11	per sample	1,505	1,505	100	1,50,500	
d	Sample preparation & House Keeping	4.2.3	per sample	795	795	100	79,500	
3	**Special Test**							
a	Ultimate analysis	4.2.17	per sample	9,945	9,945	20	1,98,900	
b	Total Sulphur	4.2.14	per sample	1,900	1,900	20	38,000	
c	Distribution of Sulpher	4.2.15	per sample	3,695	3,695	20	73,900	
d	HGI including sample preparation	4.2.18	per sample	3,805	3,805	20	76,100	
e	AFT (Ash Fusion Temperature)	4.2.20	per sample	2,745	2,745	20	54,900	
f	Ash analysis	4.2.25	per sample	325	325	20	6,500	
4	**Petrographic analysis**							
a	Pellet preparation	4.3.14a	per sample	1 160	1 160	5	5 800	
b	Maceral Analysis (with photomicrography)	4.3.14e	per sample	25,000	25,000	5	1,25,000	
c	Microlithotype Analysis (with photomicrography)	4.3.14g	per sample	25,000	25,000	5	1,25,000	
d	Mean Ro %	4.3.14j	per sample	16,345	16,345	5	81,725	
					Laboratory Studies Total		**18,62,325**	
	III- Miscellaneous Charges (Departmental)							
a	DGPS Survey of boundary, borehole points (18 boreholes & 10 boundary point)	1.6.2	per point	19,200	19,200	28	5,37,600	
b	Land crop compensation	5.6	Per bh	20,000	20,000	18	3,60,000	Amount will be reimbursed as per actuals or max. Rs. 20000 per BH with certification from local authorities
c	Preparation of Exploration Proposal	5.1	lump sum	3,80,000	3,80,000	1	3,80,000	EA has to submit the Hard Copies and the soft copy of the final proposal along with Maps and Plan as suggested by the TCC-NMET in its meeting while clearing the proposal.

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e	Peer review			10,000	10,000	1	10,000	
g	Outsourcing process cost	2.3	lump sum	5,00,000	5,00,000	1	5,00,000	will be reimbursed when copy of signed agreement/tender for outsourced component will be submitted.
h	Operational charges for CMPDI	Point 3 (iii) of SOC		15,00,000	15,00,000	1	15,00,000	will be reimbursed as per point 3 of NMET-SoC after recalculation when actual cost of outsourcing component will be provided. The copy of contract agreement for outsourced component and work completion report are also required to reimburse the operational charge
					Miscellaneous charges Total		**32,87,600**	
					Total cost for in-House component (I to III)		**82,45,925**	
3- Total Cost for outsource and in-House component (1 & 2)							**9,98,27,925**	
	Geological Report preparation (3% of work value)	5.2		For project exceeding Rs. 300 Lakh - to A minimum Rs. 9 lakh or 3% of the value of work whichever is more subject to a max. amount of Rs. 20 lakh			20,00,000	EA has to submit the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET.
4 Total Cost of the project without GST							**10,18,27,925**	
					Provision for GST (@18%)		1,83,29,027	GST will be reimburse as per actual and as per notified prescribed rate
5 Total Cost of the project with GST							**12,01,56,952**	**Say Rs. 1201.57 Lakh**
Note - If any part, mentioned in the in-house component is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. For in-house component of the project, a Certificate from the NEA regarding non outsourcing of any component/project is required.								
	1) Above rate of drilling, GPL, Chemical, Physicomechanical are budgeted rates.							
	2) There are numerous items in chemical anlysis. The CIMFR rates will be applied for actual payment.							
	3) For Physicomechanical studies, a lumpsum provision has been made. Actual may vary as per requirement. MoC approved rates will apply.							
	4)For Drilling & Geophysical the approved rates of MoC for FY 2020-21 has been taken other rates are as per approved SoC rates.							

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5) GPL rates is Rs 697/- per meter as per MoC Rates for minimum 8 parameters, the break up is as follows-

S. No.	Probe	MoC approved Rate 2020-21 (in Rs)
1	Base Log	162
2	Dual Density	110
3	Natural Gamma	96
4	Caliper	20
5	SPR	41
6	Sonic	131
7	Deviation	96
8	Resistivity	41
	Total	**697**

6) Lumpsum amount of Rs. 10,000 has been considered for Peer Review.

Annexure-2B

Timeline/work plan for Preliminary exploration (G3) for coal in West of Borda and Ghonsa-Parsoda Block, Wardha Valley Coalfield, District- Chandrapur, Maharashtra

S. No.	Activities	Months																	
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18
1	Outsourcing																		
2	Mobilising																		
3	Drilling																		
4	Borehole Geophysical logging																		
5	Survey Party days																		
6	Geologist Party days, Field																		
7	Geophysicist Party days, Field																		
8	Laboratory Studies (Band By Band)																		
9	Laboratory Studies (Overall)																		
10	Laboratory Studies (Special)																		
11	Geologist Party days, HQ																		
12	Geophysicist Party days, HQ																		
13	Report Writing & Peer Review																		

Note: Please add activities accordingly and timeline (months)

Total Time Period of Completion of Project- 18 months from Sanction of Project

Annexure-3A

Estimated cost for Preliminary exploration (G3) for coal in North of Rajathari, Pench Kanhan Tawa Valley Coalfield, District- Chhindwara, Madhya Pradesh

Total block area- 49.17 sq. km; Nos. of Borehole- 18 [1600x1600m grid]; Borehole depth range- 850 to 1000m; Completion Time- 20 monts

S. No.	Item Work	Item no in Soc	Unit	Rates as per SoC of NMET	Rate (Rs.)	Qty.	Amount (Rs.)	Remarks
1 Outsourced Component								
	I- Field operations (Outsourcing)							
A	DRILLING							
1	Drilling (As per MoC Rate 2020-21)	2.2.1.1b	m	5,619	5,619	16,900	9,49,61,100	Copy of MoC approved Rate is required
B	GEOPHYSICAL STUDIES							
1	Borehole Geophysical logging (As per MoC Rate 2020-21)	MoC Rates - Pls. refer note 5	m	656	697	16,900	1,17,79,300	Copy of MoC approved Rate is required
					Total Cost of Outsourcing Component		10,67,40,400	reimbursement of outsource component will be made as per Para 3 of NMET-SoC
2 In-House Component								
	I- Field Work							
A	GEOLOGICAL WORK							
1	Survey Work	1.6.1b	Day	8,300	8,300	20	1,66,000	
2a	Geological Party days-Field)	1.5.1b	Day	11,000	11,000	180	19,80,000	
2b	Geological Party days-HQ (Data processing & Report Preparation	1.5.1b	Day	9,000	9,000	60	5,40,000	
						Sub Total- A	26,86,000	
B	GEOPHYSICAL STUDIES							
2a	Geophysicist Party days- Field	3.19	Day	11,000	11,000	25	2,75,000	
2b	Geophysicist days-HQ (Data processing & Report Preparation)	3.19	Day	9,000	9,000	15	1,35,000	
						Sub Total- B	4,10,000	
						Field Work Total- (A+B)	3096000	
	II- Laboratory Studies							
1	Band By Band Analysis							
a	Ash + Moisture	4.2.6	per sample	700	700	1,350	9,45,000	
b	House Keeping	4.2.1	per sample	115	115	1,350	1,55,250	

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2	**Overall analysis**							
a	Proximate analysis	4.2.7	per sample	935	935	150	1,40,250	
b	Moisture at 60% RH & 40C	4.2.8	per sample	1,010	1,010	150	1,51,500	
c	GCV	4.2.11	per sample	1,505	1,505	150	2,25,750	
d	Sample preparation & House Keeping	4.2.3	per sample	795	795	150	1,19,250	
3	**Special Test**							
a	Ultimate analysis	4.2.17	per sample	9,945	9,945	20	1,98,900	
b	Total Sulphur	4.2.14	per sample	1,900	1,900	20	38,000	
c	Distribution of Sulpher	4.2.15	per sample	3,695	3,695	20	73,900	
d	HGI including sample preparation	4.2.18	per sample	3,805	3,805	20	76,100	
e	AFT (Ash Fusion Temperature)	4.2.20	per sample	2,745	2,745	20	54,900	
f	Ash analysis	4.2.25	per sample	325	325	20	6,500	
4	**Petrographic analysis**							
a	Pellet preparation	4.3.14a	per sample	1,160	1,160	5	5,800	
b	Maceral Analysis (with photomicrography)	4.3.14e	per sample	25,000	25,000	5	1,25,000	
c	Microlithotype Analysis (with photomicrography)	4.3.14g	per sample	25,000	25,000	5	1,25,000	
d	Mean Ro %	4.3.14j	per sample	16,345	16,345	5	81,725	
					Laboratory Studies Total		**25,22,825**	
	III- Miscellaneous Charges (Departmental)							
a	DGPS Survey of boundary, borehole points (18 boreholes & 10 boundary point)	1.6.2	per point	19,200	19,200	28	5,37,600	
b	Land crop compensation	5.6	Per bh	20,000	20,000	18	3,60,000	Amount will be reimbursed as per actuals or max. Rs. 20000 per BH with certification from local authorities
c	Preparation of Exploration Proposal	5.1	lump sum	3,80,000	3,80,000	1	3,80,000	EA has to submit the Hard Copies and the soft copy of the final proposal along with Maps and Plan as suggested by the TCC-NMET in its meeting while clearing the proposal.
e	Peer review			10,000	10,000	1	10,000	

g	Outsourcing process cost	2.3	lump sum	5,00,000	5,00,000	1	5,00,000	will be reimbursed when copy of signed agreement/tender for outsourced component will be submitted.
h	Operational charges for CMPDI	Point 3 (iii)of SOC		15,00,000	15,00,000	1	15,00,000	will be reimbursed as per point 3 of NMET-SoC after recalculation when actual cost of outsourcing component will be provided. The copy of contract agreement for outsourced component and work completion report are also required to reimburse the operational charge
					Miscellaneous charges Total		**32,87,600**	
					Total cost for in-House component (I to III)		**89,06,425**	
3 Total Cost for outsource and in-House component (1 & 2)							**11,56,46,825**	
	Geological Report preparation (3% of work value)	5.2		For project exceeding Rs.300 Lakh - to A minimum Rs. 9 lakh or 3% of the value of work whichever is more subject to a max. amount of Rs. 20 lakh			20,00,000	EA has to submit the final Geological Report in Hard Copies (5 Nos) and the soft copy to NMET.
4 Total Cost of the project without GST							**11,76,46,825**	
					Provision for GST (@18%)		2,11,76,429	GST will be reimburse as per actual and as per notified prescribed rate
5 Total Cost of the project with GST							**138823254**	**Say Rs. 1388.23 Lakh**

Note - If any part, mentioned in the in-house component is outsourced, the amount will be reimbursed as per the Paragraph 3 of NMET SoC and Item no. 6 of NMET SoC. For in-house component of the project, a Certificate from the NEA regarding non outsourcing of any component/project is required.

1) Above rate of drilling, GPL, Chemical, Physicomechanical are budgeted rates.

2) There are numerous items in chemical anlysis. The CIMFR rates will be applied for actual payment.

3) For Physicomechanical studies, a lumpsum provision has been made. Actual may vary as per requirement. MoC approved rates will apply.

4)For Drilling & Geophysical the approved rates of MoC for FY 2020-21 has been taken other rates are as per approved SoC rates.

H Singh 18/8/21

18/08/21

	5) GPL rates is Rs 697/- per meter as per MoC Rates for minimum 8 parameters, the break up is as follows-			
	S. No.	**Probe**	**MoC approved Rate 2020-21 (in Rs)**	
	1	Base Log	162	
	2	Dual Density	110	
	3	Natural Gamma	96	
	4	Caliper	20	
	5	SPR	41	
	6	Sonic	131	
	7	Deviation	96	
	8	Resistivity	41	
		Total	**697**	
	6) Lumpsum amount of Rs. 10,000 has been considered for Peer Review.			

Annexure-3B

Timeline/work plan for Preliminary exploration (G3) for coal in North of Rajathari, Pench Kanhan Tawa Valley Coalfield, District-Chhindwara, Madhya Pradesh

S. No.	Activities	Months																		
		1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
1	Outsourcing																				
2	Mobilising																				
3	Drilling																				
4	Borehole Geophysical logging																				
5	Survey Party days																				
6	Geologist Party days, Field																				
7	Geophysicist Party days, Field																				
8	Laboratory Studies (Band By Band)																				
9	Laboratory Studies (Overall)																				
10	Laboratory Studies (Special)																				
11	Geologist Party days, HQ																				
12	Geophysicist Party days, HQ																				
13	Report Writing & Peer Review																				
Note: Please add activities accordingly and timeline (months)																					
Total Time Period of Completion of Project-20 months from Sanction of Project																					

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